CAREER SALIENCE AND OCCUPATIONAL CHOICE OF TEST ANXIOUS COLLEGE STUDENTS

By

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By

Margaret Jordan Green

To

Anne Murray Green

1953 - 1976

In Loving Memory

She was a great joy to me,

and always will be.

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The principal reason for this study was to test a hypothesis that there is a positive relationship between career salience and test anxiety. This hypothesis was developed from the investigator's clinical observations and from Rollo May's theory of anxiety, i.e. that anxiety stems from a threat to a value which a person perceives as essential to his or her existence as a personality.

The investigator developed the Ranked List of Life Values (RLLV) as an instrument to measure career salience. This instruments asks the subjects to imagine themselves to be 80 years old and to be reflecting on a full and satisfying life. They are then asked to rank ten items, given in statement form, in order of importance. Among the value statements to be ranked is "I have had a satisfying career in an occupation of my choice."

The RLLV and the Mandler-Sarason Test Anxiety Scale (TAS) were used with a sample of 60 students from the University of Florida's Reading and Study Skills Center to test the principal hypothesis. The Reading Center students represented a good cross section of college students in occupational interest and in academic ability. Limitations are first,

that they were mainly from the lower division and, second, that they presumably did not include students completely apathetic toward academic success.

The TAS was the 37 item true-false version. Students in the upper third of the distribution (scoring above 21) were designated high test anxious (HA); those in the lower third (scoring below 13), low test anxious (LA). The principal hypothesis was not supported by the data. No significant relationship ($p < .05$) between career salience, as measured by assigned rank in a list of ten values, and test anxiety was found.

The Vocational Preference Inventory (VPI) was also administered. Occupational type, as measured by VPI raw scores, was not found to be related to either test anxiety or career salience. Breadth of career choice, as measured by the Acquiescence Scale (Ac Scale) was found to be related ($p < .05$) to test anxiety but in the opposite direction to that predicted. LA students were found to score significantly lower on the Ac Scale. Finally, it was found that female college students are as frequently test anxious as are males, and rank career as highly as do male college students.

A further examination and analysis of the data by sex indicated that there were significant interactions between sex and test anxiety for two of the VPI types, Investigative and Artistic. HA women scored significantly higher ($p < .01$) than LA women on these two scales. Furthermore, on the Ac Scale, LA women scored significantly lower ($p < .001$) than HA women. No significant differences ($p < .05$) were found between the means for the male subgroups on these three scales. Discussion of results for these later findings as well as for those of the main part of the study included implications for counselors and for future research.

CHAPTER I

INTRODUCTION

Test anxiety is a continuing problem among college students, and with the increased pressures of the 1970's caused by difficulties in finding employment, it may be more intense in the future. The economic situation has forced on many universities both more selective admission standards and larger classes. As a result, college students today are faced with tougher competition, less personal attention from teachers, and an increased concern for making a living after graduation. Those students planning on graduate programs are doubly threatened; they must perform well on course tests in order to maintain a high grade point average, and they are faced with the additional hurdle of graduate admission tests. These pressures, severe enough for ordinary students, aggravate the problem of test anxious students and put them at an even greater disadvantage. For college teachers and counselors, a better understanding of the factors involved in test anxiety is needed to treat the problem more effectively.

Overview of Test Anxiety Theories

In this study, test anxiety is defined as an unpleasant state, characterized by autonomic arousal and disproportionate worry, taking place before, during, or after a test, and perceived by the test taker as having a detrimental effect on test performance.

Test means, in this context, a written examination in formal academic surroundings. Autonomic arousal refers to involuntary physiological changes such as sweating or trembling.

All the theories of anxiety, per se, will not be reviewed in this study partly because of space limitations, but mainly because some are not particularly relevant to the special problem of test anxiety. Moreover, insofar as measurement is concerned, many studies reveal a distinction between general anxiety and test anxiety (Alpert & Haber, 1960; Desiderato & Koskinen, 1969). Sarason (1972) suggests "that the overlap between test and general anxiety is not sufficient to make the two concepts synonymous . . . . They are positively correlated, but not at the level of a reliability coefficient" (p. 383). However, those theories of anxiety or specific aspects of them, which appear to cast some light on the special problem of test anxiety will be considered here.

Wolpe's theory of anxiety is the most widely applied to the particular manifestation of test anxiety. According to Wolpe (1958), a specific anxiety is a conditioned emotional habit and nothing more than that. A predisposing condition may exist before the anxiety is acquired, but it is not a necessary antecedent; it is sufficient to focus on the habit itself and eliminate it through therapeutic techniques such as systematic desensitization. For nearly twenty years, Wolpe's technique and variations of it have been the treatment of choice for test anxiety. Paul's study (1966) showing the superiority of systematic desensitization over insight-oriented psychotherapy in reducing speech anxiety led to even greater enthusiasm for Wolpe's method and for the theory behind it.

Lazarus and Serber (1968), however, question the efficacy of systematic desensitization and cite several studies in which the beneficial results were not obtained or were not enduring. Furthermore, they record several case studies in which systematic desensitization was used inappropriately. The indiscriminate use of this technique to treat test anxiety can be considered a case in point. A student may be realistically, not neurotically, anxious about tests because he or she is inadequately prepared academically. These students need training in study skills and practice in test taking. Many experimenters using systematic desensitization report success as measured by a decrease in self-reported test anxiety and perhaps an improved performance in laboratory learning tasks; a rise in grade point average, however, is less frequently reported. Allen (1972), in his critical review of 12 studies concludes that "the literature supports the contention that a combination of densensitization and study counseling promotes greater academic performance than either procedure alone" (p.259).

Students may well be experiencing test anxiety because of a combination of neurotic and realistic bases. In these cases, study counseling may have a two-fold beneficial effect; more efficient and sophisticated study techniques directly improve performance of tests and thus reduce anxiety and, indirectly, greater competence gained through improved study skills alleviate the feeling of helplessness. Kahn (1976), for example, found that training in "testwiseness" alone reduced self-reported anxiety (although it did not improve performance on a reading comprehension test).

Helplessness is an important component in many anxiety theories. Basic anxiety, as defined by Hinsie and Campbell (1970) is "Horney's term for a feeling of loneliness and helplessness toward a potentially hostile world" (p.50). In The Neurotic Personality of Our Time, Horney describes the ways in which the inevitable helplessness of a child is an underlying basis for anxiety:

> The more helpless a child is made the less will it dare to feel or show opposition, and the longer will such opposition be delayed. In this situation the underlying feeling--or what we may call the motto--is: I have to repress my hostility because I need you. (1937 / 1964, p.86)

Freud, too, discussed the relationship of helplessness and anxiety in the addenda to The Problem of Anxiety (1936/1963, pp. 112-117). In Horney's theory, however, the concept of helplessness plays a more central role.

The helplessness-hostility conflict is related directly to test anxiety by Sarason, Davidson, Lighthall, Waite, and Ruebush (1960). As summarized by Izard (1972), Sarason et al analyze test anxiety as follows:

> In order to avoid real danger, the child has to repress hostility toward a parent for one or more previous test-like evaluations. Next the child feels guilty for his hostility toward his usually beloved parent. The guilt has to be relegated to the unconscious as much as possible, but when it does become conscious such as in the test situation the child's negative feelings put him in a self-derogatory attitude. Ultimately the self-derogating attitude leads the child to doubt his ability in the testing situation, and to compound the uncertainty the child tends to fantasize about the parent's retaliation for the child's hostility. (p.56)

Sarason and Koenig (1965) have found this self-derogating attitude characteristic of test anxious college students as

measured by a high number of negative self-references in samples of free verbalization. In a more recent article, Sarason (1975) states, "available evidence suggests that the highly test-anxious individual is self-centered in that he is preoccupied with present and potential evaluations of his work. He worries about himself, his intellectual wherewithal, and the reactions of others to his performance" (p. 149). A recent trend in test anxiety treatment focuses on this maladaptive self-concern (Wine, 1971; Meichenbaum, 1972; Sarason, 1975). The following anecodote illustrates what takes place in the mind of a test anxious and overly vigilant worrier who is preoccupied with self-relevant instead of task-relevant cues. The English poet, Stephen Spender, writes about his examination anxiety in his autobiography (1966):

> Certain examinations . . . seemed as difficult as scaling some great height. Indeed, to climb a real Alp would have been easier, because it would have presented a tangible difficulty, whereas the difficulty contained within Examinations seemed impalpable. . . . . Even answering a question in class became a problem, for the idea of some insuperable Difficulty lurking within the question distracted me from the question itself. I meditated on the idea of Difficulty: what was Difficult could not be easy; but if I knew the answer that would be easy, therefore it could not be the correct answer, and the question must conceal some hidden trap. How often at school the boy next to me, or the one next to him, gave the right answer, which I had known, but could not believe to be correct, just because it appeared easy. (p. 8)

In his 1975 article, Sarason speculates that there are two types of test anxiety: the first is a more focused type of problem stemming from inadequate learning experience or from past traumas; the second type is of a more generalized nature and "is characterized by (a) anxiety and worry in other areas and (b) conflict and ambivalence over

achievement and being evaluated" (p. 152). As stated earlier in this chapter, the first has, until recently, received the most attention in the literature; the maladaptive self-focusing worry component is of increasing current interest. But rarely does one see a direct reference to "conflict and ambivalence over achievement" as a contributing factor to test anxiety. Perhaps this is because it is too obvious to deserve mention, or it might be ignored because it is so difficult to identify and quantify. Many writers are concerned with motivational conflict in college students but do not suggest that it might be a cause of forgetting previously learned material during a test. An exception is Beery (1975) who discusses fear of failure, level of aspiration, and success avoidance. "They [students] even suffer test anxiety, which can prevent anyone from showing all that she or he knows" (p. 198). Roulet (1976) traces success neurosis among college senior men to anxiety over competition with their fathers, but only indirectly alludes to test anxiety. Malnig (1967) discusses fear of parental competition, but only in connection with career choice. Bordin and Kopplin (1973) also write about motivational conflict and career development. A quotation from Freud best expresses the psychodynamics of success neurosis:

> Other inhibitions evidently subserve a desire for self-punishment, as for example not infrequently those in the sphere of vocational activity. The ego dares not do certain things because they would bring an advantage and a success which the strict superego has forbidden. Thereupon the ego renounces these activities also, in order not to become involved in conflict with the superego. (1936/1963, p. 15)

Horner's studies (1970, 1972) on women's motive to avoid success, and the recent controversy her conclusions have precipitated (Robbins & Robbins, 1973; Tresemer, 1974; Beery, 1976) add to our understanding of achievement conflict. Perhaps, one application of this renewed interest and greater understanding will be to relate it to test anxiety.

To summarize some of the possible factors contributing to test anxiety, students may fall into any of the following categories or into any number of combinations of them: (a) those with undisciplined or naive study habits, (b) those who have a conditioned fear of tests, because of specific traumas in test situations or a more generalized anxiety over being evaluated by authority figures, (c) those who, under pressure, turn their thoughts inward to self-preoccupied worry instead of outward toward the task, and (d) those whose unconscious fear of success leads them to block known material and compulsively change right answers to wrong ones. In addition to all of these, test anxiety may sometimes involve still another contributing factor, that of career salience, or the degree of importance attached to a career in an individual's value system.

Purpose of the Study

In over two years' experience as a counselor who interviewed and treated a large number of test anxious students, the writer observed that many of them seemed unusually committed to their career choices, and that they saw the chosen career as an extremely important part of their future. Career was a salient feature of their planned lives; to put it another way, they seemed high in career salience. The vocational

theorist, Zytowski, defines career salience as "the degree to which the person derives his life satisfactions from work, as opposed to non-work sources" (1970).

It was to determine whether or not the subjectively observed correlation between test anxiety and career salience would be found in a controlled inquiry that this study was undertaken. If, using controlled conditions, an adequate number of subjects, and more valid and reliable measures than personal observation, it could be shown that such a correlation exists, then there could follow several implications for the counseling profession. For example, more emphasis might be placed on vocational theory in the education of counselors, and it might be better integrated into counseling theory as a whole. Administratively, colleges might arrange for career counselors to work more closely with those counselors concerned with study skills and academic performance. Regardless of the results of a controlled inquiry, more knowledge would be gained regarding the correlates of both test anxiety and career salience.

The hypothetical relationship between career salience and test anxiety can be explained, in general, by self-concept theory; that is, that an individual perceives himself or herself as being in a particular occupation and becomes anxious when access to that career seems to be threatened. But one specific theory of anxiety seems particularly applicable; Rollo May (1950) defines anxiety as follows:

> Anxiety is the apprehension cued off by a threat to some value which the individual holds essential to his existence as a personality. The threat may be to physical or psychological life (death, or loss of freedom), or it may

> be to some other value which the individual identifies with his existence (patriotism, the love of another person, "success," etc.). This identification of a value with one's existence as a personality is vividly illustrated in the remark of Tom . . . in his period of anxiety over whether he would be retained in his job or be forced to resort again to government relief: "If I couldn't support my family, I'd as soon jump off the end of the dock." This, put simply, is his way of saying that if he could not preserve the self-respecting position of being the responsible wage-earner, his whole life would have no meaning and he might as well not exist . . . . What will always be true in anxiety is that the threat is to a value held by that particular individual to be essential to his existence and consequently to his security as a personality. (p. 191)

In a counseling session with a student who had been referred for test anxiety, the writer was reminded of the despair implicit in Tom's remark. This student was an accounting major, but he had trouble performing adequately on accounting tests. He would work the problems incorrectly on a test, but as soon as he returned to his room, he could solve them without looking at his notes. In the course of talking about his career plans, the following dialogue took place:

Counselor: Jack, if you couldn't be an accountant, what would you do?

Student: You mean if I flunked out of here? Well I'd look into some other schools with easier standards and start applying and . . . .

Counselor: No, that's not what I meant. Suppose I looked into a crystal ball and said to you, "Jack, you are never going to <u>be</u> an accountant." How would you feel?

Student: I'd feel lost, completely lost.

It should be stressed, of course, that all career salient students are not necessarily test anxious. Many are so competent, emotionally and academically, that their goals are realistically attainable. They

may have a history of test success, and be comfortable and confident in situations involving evaluation. They may, even when anxious, be aided by a coping defense style of repression and thus characteristically block out all thoughts of failure, concentrating fully on the tasks required by a test. And they may be free of motivational conflict over success.

But, at best, the choice of a career is almost invariably a compromise. Ginzberg (1972) states that "our reformulated theory is that occupational choice is a lifelong process of decision-making in which the individual seeks to find the optimal fit between his career preparation and goals and the realities of the world of work" (p. 172). Kelly (1955), although not primarily a vocational theorist, applies his theory of personal constructs to vocational choice:

> One can frequently see in a person's spontaneous choice of vocation, or a course of study in school, his seeking of a happy compromise between what is challenging and what is safe . . . . In gaining access to personal constructs through an analysis of vocational experience, one should always take account of the compromise between adventure and security the vocation represents for the client. (pp. 748-749)

For students concerned about future employment but not quite ready to give up what they perceive as challenging and adventurous, this stage of their vocational development and their changing self-concept could well be one of approach-avoidance conflict manifesting itself in test anxiety.

Security can also be seen in a symbolic as well as an economic way. A vocational choice may represent the security of a settled identity to a person caught in an identity struggle. Bordin and Kopplin (1973) write that "for the college-going youth, the college years are the period of sharpest focus in identity formation and a time when vocational

choice and identity formation are intimately intertwined, perhaps even fused" (p. 155).

It should be emphasized that career salience does not imply maladjustment. Indeed, it has generally been considered the opposite--a sign of vocational maturity and responsible commitment. But even for capable students with realistic, attainable career goals, a high degree of career salience can aggravate or induce test anxiety if they are already predisposed to it, simply because they place such a high value on attaining their goal. Every test becomes a threat to this value so essential to their existence.

Research Questions

The purpose of this study, then, is to test a hypothesis, derived both from personal observation and from Rollo May's theory of anxiety, that a high degree of career salience is one of the correlates of test anxiety. The principal research questions are as follows:

1. Are high test anxious students higher in career salience than low test anxious students?

2. Are high test anxious students more narrow in their choice of careers than are low test anxious students?

3. Are high test anxious students more firmly decided on their careers than are low test anxious students?

If test anxiety is a result of the wide variety of contributing factors suggested by the theories and studies discussed in this chapter, then it should not be related to a particular occupational type. Holland's typology is an appropriate model because it integrates personality with vocational interests. In a recent introduction to his theory, Holland

(1973) states as background principles (a) "The choice of a vocation is an expression of personality" (p. 6) and (b) "Interest inventories are personality inventories" (p. 7). Using Holland's model, the following question is asked:

4. Is there a relationship between test anxiety and any of Holland's six occupational types?

Again, the complexity of test anxiety suggests it is not related to sex and leads to the next question to be investigated:

5. Are women students as frequently test anxious as men?

Finally, to investigate some characteristics of career salience, the following two questions are asked:

6. Are women students as high in career salience as men?

7. Is there a relationship between career salience and any of Holland's six occupational types?

Definition of Terms

Test anxiety and career salience have been defined earlier in this chapter and will be defined operationally in Chapter III. A note on the choice of the word salience instead of saliency: although the latter was used by Kuhlen (1959), Masih (1967), and Zytowski (1970), salience is the preferred dictionary choice, and career salience is the term currently used by writers (e.g. Cooper, 1976; Greenhaus, 1976).

Occupational choice will be used interchangeably with career choice and vocational choice.

Narrowness of choice will be defined operationally in Chapter III.

CHAPTER II

REVIEW OF THE LITERATURE

This review will cover three areas. The first is a section on test anxiety and will emphasize theory and trends more than specific varieties of treatment. The second covers career salience, and will include a review of differing attitudes and definitions as well as personality correlates of this variable. The last section will be about those aspects of occupational choice which are of special concern in this study: occupational interests, decidedness of career choice, and narrowness of choice.

Test Anxiety

This review will focus on two basic trends in test anxiety research: the first is a behavioral approach and is based on Wolpe's (1958, 1969) theory of anxiety and therapeutic techniques; the second may be called dynamic and is as concerned with underlying causes and personality correlates as it is with methods of treatment. Both groups of researchers have studied test anxiety partly to discover ways of treating college students who need help and partly because it is a manageable problem to examine, manipulate, and measure in university laboratories, with a large supply of willing subjects. In other words, test anxiety is a much more common problem among college students than is, for example, agoraphobia; it is, therefore, a more appropriate target for both clinicians and researchers. Both groups--the behavioral

and the dynamic--expect to be able to generalize from their findings to other problems of anxiety; the emphasis, however, is different.

Behavioral Research

The behavioral group concentrates on simplifying and perfecting techniques under controlled experimental conditions. The efficacy of these techniques is measured by self-report instruments such as the Achievement Anxiety Test (Alpert & Haber, 1960), the Test Anxiety Questionnaire (Mandler & Sarason, 1952), the Test Anxiety Scale (Sarason, 1958a, 1972), or the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

Wolpe's systematic desensitization is the most widely used technique, and much of the literature concerns simplifications and adaptations of it. For example, Lazarus (1961) introduced a more economical group procedure, and Emery and Krumboltz (1967) developed standardized hierarchies for specific phobias. Massed, or marathon, sessions shortening the overall length of treatment are another effective development (Suinn & Hall, 1970; Dawley & Wenrich, 1973). Suinn and Richardson (1971) have also developed the variation of anxiety management training which eliminates the construction of standard hierarchies by having subjects imagine their own choice of an anxiety-stimulus scene.

Some other behavioral techniques which have been applied successfully to test anxiety include implosive therapy (Prochaska, 1971), reactive inhibition (Graff, MacLean, & Loving, 1971), and covert reinforcement (Guidry & Randolph, 1974). Another innovation is the use of relaxation techniques alone (Denney, 1974; Paul, 1969). Whereas this

appears to be a full circle return to Jacobson's (1938) original exercises in progressive relaxation training, the procedure has been considerably shortened and simplified since then. Wolpe (1958), also, reported a case in which he used relaxation as an end in itself rather than as a component of systematic desensitization.

> She [Wolpe's patient] was astonished at how easy it was for her to become calm through muscle relaxation. She deliberately calmed herself in an increasing range of situations, and their anxiety-evoking power waned and eventually disappeared. (p. 138)

The advantages of the relaxation technique over the complete desensitization procedure are that it is shorter and simpler to explain and administer, it is useful for those clients who have difficulty in visualizing the hierarchical scenes, and it can be applied more flexibly. Bernstein and Borkovec (1973) have produced a useful manual for the helping professions with complete descriptions of the steps in progressive relaxation training. Russell and Sipich (1974) reported successful treatment of test anxiety with the technique of cue-controlled relaxation in which the client--after attaining a relaxed state through progressive relaxation--repeats silently the word "calm" with each breath exhalation. There are obvious parallels in this technique with meditation practices. In fact, meditation has been successfully used with school children to alleviate test anxiety (Linden, 1973); no studies have been reported with test anxious college students, however. In a recent review article, Shapiro and Zifferblatt (1976) discuss the general similarities and differences between Zen meditation and behavioral self-control, clinical applications, and implications for future research.

Some studies have not found relaxation to be effective, however; nor, for that matter, has systematic desensitization invariably been effective (e.g. Lamont & Sherman, 1971; Meyer & Crisp, 1966). Goldfried and Trier (1974) review many conflicting reports and argue that inconsistent results may be due to differing explanations given to the subjects regarding the usefulness of the technique. They found that subjects who were told that they were learning an active coping skill to self-control anxiety were more successful in reducing speech anxiety than were those who received neutral instructions. Furthermore, subjects in the self-control group continued to improve after the conclusion of the experimental sessions.

Another trend in behavioral research has been toward what Lazarus and Serber (1968) call broad spectrum therapy. In their article on the inappropriate use of desensitization, they suggest more careful diagnosis of phobic problems, and cite several case histories where re-education, modeling, practice, and supportive therapy groups were more effective, singly or in combination, than the traditional method of systematic desensitization. A mixed format of techniques is also recommended by Akin and Kunzman (1974), who found that practice sessions combined with desensitization were as effective as desensitization alone, but, more importantly, the combined approach resulted in less attrition of subjects.

Test anxiety is a particularly appropriate target for a mixed format approach. Katahn, Strenger, and Cherry (1966) combined systematic desensitization (with emphasis on additional relaxation practice) and group counseling centering on personal problems related to achievement and

test taking, time use, and goal setting. There was a significant decrease on a self-report test anxiety measure, and an increase in grade point averages. The authors also reported that

> While the relaxation procedures and the desensitization process seemed important to the students, they invariably felt (in response to a questionnaire item at the conclusion of the program) that the most important aspects of the program were just being able to talk about their problems with other students, finding out that these were having similar experiences, and learning how to organize their study habits. (p. 548)

In a more intricate research design, Mitchell and Ng (1972) obtained the same positive results in improved academic performance and reduced anxiety by combining study oriented group counseling with desensitization. Larsen (1972) also reports success with an eclectic approach involving relaxation, reactive inhibition, and group counseling in which

> Interaction is related to present and past emotions associated with academic success, family expectations, and self-goals . . . . Vicarious experiences in test taking are given with the associated threats of limited timing, difficult comprehension passages, and ambiguous questions. (p. 201)

In a carefully controlled study, Allen (1973) found that anxiety was decreased and grades improved with both group counseling in study skills and self-administered use of study skills manuals--although there was greater attrition with the latter treatment.

Interest in the cognitive factors in behavior modification is another recent trend in behavioral research with useful applications to test anxiety treatment. Meichenbaum (1972) is the major investigator in this area which sees self-statements as types of behavior subject to

modification. Thus, a test anxious student may first be made aware of maladaptive self-verbalizations and then be trained "to emit task-relevant self-statements and to perform incompatible behaviors such as relaxation" (p. 25). As a technique, cognitive modification has much in common with Coué's autosuggestion (1922), Kelly's fixed-role therapy (1955), and the rational-emotive therapy of Ellis (1962). Goldfried and Goldfried (1975) fully describe therapeutic guidelines for rational restructuring in a test anxious group (pp. 91-104).

In its specific application to test anxiety, Meichenbaum's approach is similar to that of Wine (1971), who emphasizes direction of attention. It is also congruent with much of Sarason's approach, which will be covered in the next section.

Dynamic Theory and Research

As opposed to behaviorists, who focus on elimination of symptoms, a more analytically oriented group of researchers emphasize the dynamic basis of test anxiety. This dynamic hypothesis, which stresses the underlying antecedent conditions of test anxiety, has been described in the preceding chapter on page 4. Its proponents, including George Mandler, Irwin Sarason, and Seymour Sarason, form what is known as the Yale School (in contrast to the Iowa School which emphasizes the study of general manifest anxiety as a characteristic individual trait). As Levitt (1967) explained, the Yale School believes that "there may be a general trait of anxiety, but behavioral science is not yet prepared to investigate it. It is first necessary to thoroughly study important situational anxieties" (p. 117).

The Yale theorists chose to focus on test anxiety as a target study because

> It is a near-universal experience in our culture . . . . It is not hyperbolic to maintain that quality or level of test performance is one of the most important determinants of the lives of members of our society. We are a test-giving and test-conscious culture. (S. Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960, p. 8)

> In focusing on test anxiety we have assumed that whatever understanding of that anxiety we may gain will have significance for our understanding of anxiety in general. (p. 2)

S. Sarason, Mandler, and Craighill (1952) summarize their theoretical position as follows:

> Anxiety will be considered as a learned drive with the characteristics of a strong stimulus. When anxiety has been learned as a response to situations involving intellectual achievement (e.g. test situations), two types of responses will tend to be evoked: (a) Responses which are <u>not</u> task-relevant; self-centered feelings of inadequacy, attempts at leaving the situation, etc. (b) Task-relevant responses which tend to reduce the anxiety by leading to the completion of the task. These are identical with other task-relevant responses evoked by the testing situation. (p. 561)

Alpert and Haber's (1960) Achievement Anxiety Test measures both types of responses by including two scales--items which indicate debilitating anxiety (response type <u>a</u>) and those which indicate facilitating anxiety (response type <u>b</u>). Liebert and Morris (1967) have analyzed debilitating anxiety and note two factors: <u>worry</u> or cognitive concern and <u>emotionality</u> or autonomic arousal. <u>Worry</u> includes concern about one's ability relative to that of others, concern with failure, and self-deprecatory feelings. Several studies with laboratory learning tasks demonstrate the maladaptive nature of the worry component. S. Sarason, Mandler, and Craighill (1952) describe an experiment in

which high test anxious (HA) students were divided into two groups and given different directions regarding the same multi-trial learning task. One group was told it was easy "for college students"; the other, that it was so difficult that no one was expected to finish. The HA group worked faster and more accurately when given the not-expected-to-finish instructions than did the LA group. The two groups performed in the reverse manner when given the easy-to-finish directions. As the HA's experienced repeated failure (contrary to their expectations) their performance declined. The LA's, under the stress of challenging conditions, were apparently motivated to attend even more fully to the task.

In another experiment, I. Sarason (1958b) obtained similar results with reassuring instructions (e.g. "these kinds of lists are hard, and so it's no surprise or matter of concern if you progress slowly at first and make mistakes") and neutral instructions.

I. Sarason and Ganzer (1962) found further evidence of the poor self-concept of high test anxious students in a study involving free verbalization sessions with an experimenter who recorded the number of negative self-references. They found that HA students made a significantly higher number than LA students. In a related study, I. Sarason and Koenig (1965) confirmed the earlier results regarding self-references and found, further, that HA students made fewer negative statements regarding their parents. They conclude that "high test-anxious subjects tended to be more self-critical and self-debasing in their descriptions of themselves than low test-anxious subjects" and that "test-anxiety scores are not

a function simply of a tendency to emit socially undesirable statements. Rather, as already suggested, they seem to reflect self-preoccupation and low-esteem" (p. 620).

In Wine's (1971) study on test anxiety and the direction of attention, she concludes that "the reason 'worry' debilitates task performance is that it is attentionally demanding and distracts attention from the task" (p. 98). Wine also argues that the emotional component has little debilitating effect unless the autonomic arousal is so extreme that it is, in itself, attentionally distracting.

A recent focus in test anxiety research is on the influence of models (I. Sarason, 1973, 1975; I. Sarason, Pederson, & Nyman, 1968). In the 1968 study, results indicated that the performance of test anxious students was facilitated in a laboratory learning task by the opportunity to observe a successful model. In the 1973 experiment, one condition consisted of a model performing an anagram solving task while verbalizing the thinking process involved, including some underlying principles of problem solving. High test anxious students solved more problems under these circumstances than did low anxious ones.

In his 1975 experiment, Sarason has added the element of self-disclosure to the modeling variable in a laboratory learning task. A model, under one condition, presents herself as a high test anxious person who worries about being evaluated, especially by authority figures. She discusses ways she has learned to cope with this, e.g.

> (a) reminding yourself periodically to stop thinking about yourself and to concentrate on the task at hand;
> (b) thinking about aspects of the task that might be

> especially interesting to you; (c) not allowing yourself to get flustered by errors and difficult items, but to keep working on the task at a steady pace; (d) forcing yourself not to think about other people and how they will or might perform the task. (p. 150)

Other experimental conditions involved a non-coping model, a low anxious one, a neutral one (who talked about campus events), and no model. The mean of correct responses on the learning task for the high anxious students who were in the anxious coping model's group was significantly higher than for those under any of the other conditions, and higher than the means for the low anxious students under all of the conditions.

In his introduction to this article, Sarason writes that "the experiment represents a confluence of lines of research in the areas of test anxiety, modeling, and self-disclosure" (p. 148). More generally, it also represents a bringing together of the results of work in the two fields of applied and basic research.

Career Salience

Zytowski (1970) defines career salience as follows:

> The degree to which the person derives his life's satisfactions from work, as opposed to non-work sources. The person whose whole life is bound up in his occupation, who makes no distinction between them, would be understood to be very high on career saliency, while the person who works only to be able to avail himself of the satisfactions found away from the job would be low on this variable. (p. 16)

This description is neutral in tone. No value judgment is placed on the quality; it is simply cited as a variable which is one of the components of vocational development. In general, however, the emphasis has been that career salience is a characteristic to be developed or increased.

Kuhlen and Dipboye (1959), apparently the first investigators of career salience as a defined construct, gave the following purpose for their study:

> A part of the motivation for undertaking the study grew out of the assumption that efforts to attract people into occupations, such as teaching, where critical personnel shortages exist, will be successful to the degree that such efforts reflect an awareness of the motivational and personality factors that predispose to the selection of those occupations. (p. 1)

In this study career salience (high, medium, and low) was determined by judges in one hour structured interviews. It was found, as predicted, that women and men selecting teaching as a career were lower in career salience than were students planning to enter other occupations. In their concluding comments, Kuhlen and Dipboye suggest ways of changing the teaching profession in order to attract those "psychologically vigorous individuals who are interested in a career and in personal achievement as well as in such intrinsic satisfactions as derived from helping others" (p. 121).

Masih (1969), also using the interview technique of assessment, found that men who had chosen teaching as a career were significantly lower in career salience than men planning other careers. He did not find the same results in the female sample. Among the small proportion who were classed as career salient (23 out of 118), significantly more were prospective teachers than non-teachers. Masih's concern with his findings was the low career salience among the men.

> If the finding holds true for the profession of teaching in general, as it did with the prospective teachers, it certainly strikes a pessimistic note. A profession cannot experience efficient growth when it possibly has in its

> folds a large number of individuals who attribute only a secondary importance to their professions. (p. 775)

Greenhaus (1971), in his investigation of the role of career salience in vocational behavior, reviews several studies concerned with attitudes toward work, and appears more neutral than the previously mentioned writers in his attitude toward career salience. In other words, he sees it as an individual difference in the perception of the importance of work and career rather than an assumed highly desirable quality. His attitude is consistent with the recent trend of questioning some of the basic assumptions about the importance of work (e.g. Osipow, 1969; Warnath, 1975). Tolbert (1974), for example, states that "work may not be central to the value systems of all individuals, though all theories assume it to be" (p. 29).

Greenhaus also sees career salience in a more complex way than do some other writers.

> Career salience may have different meanings to different people. An intense interest in performing well in a career, the need for power, money, or advancement, and the desire to escape an unhappy homelife may all contribute (singly or in combination) to one's attitude toward work. (p. 215)

Greenhaus uses in his studies a 28-item questionnaire developed by himself (1971). This instrument includes items related to three aspects of career salience: (1) the relative priority of a career (e.g. "I intend to pursue the job of my choice, even if it allows only very little opportunity to enjoy my friends"); (2) general attitudes toward work (e.g. "Work is one of those necessary evils"); and (3) career advancement and planning (e.g. "Planning for a specific career is usually not

worth the effort"). This concept of career salience differs slightly from those definitions expressed by Kuylen and Dipboye (1959), Masih (1967, 1969), and Zytowski (1970) who do not explicitly mention planning or attitude toward work as components.

Angrist (1972) confines her studies of career salience to college women only, defining the concept as "the desire to pursue a career during various stages of childrearing regardless of financial need" (p. 88). The items in her measure of career salience, the Life Style Index, are written specifically for women, e.g. "Fifteen years from now, would you like to be: A housewife with no children . . . ." In her longitudinal study of college women, her choice of words convert to and defector from career salience suggests a definite value judgment. Cooper (1976) uses Angrist's Life Style Index in a study to determine the effectiveness of different treatments to increase career salience among college women.

Correlates of Career Salience

Kuhlen and Dipboye (1959) were primarily concerned with occupational choice and found, as predicted, that education students were lower in career salience than were students in other fields. Masih (1969) reports similar results for men but not for women. Women, however, were comparatively lower than men in career salience in both the teaching and the non-teaching groups.

In another study, Masih (1967) focused on needs, interests, and job values related to career salience among upper division students. As measured by the Edwards Personal Preference Schedule, high career

salient men were found to be lower on the Heterosexuality scale and higher on Endurance; the opposite was true for low career salient men. Both groups were similar in need for Achievement. Concerning job values, both groups showed a desire for prestige. The high career salient women were high on needs for Achievement and Endurance but did not differ significantly from the low career salient group on the Heterosexuality scale. Regarding job values, the high career salient women were more interested in fame and less in prestige than were the low salient group. In this study, students were categorized as high, medium, and low career salient by three judges in structured interviews. In the opinion of the judges, the high career salient women were as highly career motivated as the high career salient men. The proportion of women in the high career salient group was, to a highly significant degree, lower than that of men, and Masih concludes that "it would appear that high Career Saliency is a typical male pattern" (p. 658).

A study by Greenhaus (1971) supports Masih's finding regarding high career salience as more typical of males. However, the gap between men and women on this variable appears smaller in the Greenhaus study. Greenhaus found means (as measured by his own questionnaire) of 90.78 for 104 males and 87.89 for 273 females. This difference was reported as significant at the .05 level. Masih's judges, on the other hand, reported 51 men out of 68 as high career salient, and only 23 out of 118 women as high career salient. It is impossible, of course, to quantify the difference in proportions of high career salient men and women in the two studies given the differences in research instruments,

settings, and samples. Greenhaus reports the following personality correlates of career salience for both men and women: desire for prestige, educational aspiration, occupational satisfaction, self-rated effort, ambition, scholarship, and persuasiveness. These attributes were obtained from a self-rating of personal traits and the findings are partially consistent with those of Masih's on prestige and achievement. In his 1973 article, Greenhaus found a significant relationship ($p < .01$) between career salience and choice of ideal occupation (as determined by exact match between the student's perceived ideal choice and his or her stated choice).

Almquist and Angrist (1970) found high career salience in college women strongly related to atypicality of occupational choice. An occupational choice was considered atypical if fewer than one-third of the workers in it were women. They also investigated familial and social correlates and the work history of high and low career salient students and describe two hypotheses concerning their results: deviance and enrichment. The deviance hypothesis explains career salience as a result of social learning experiences which direct a girl toward an unconventional masculine self-image. The enrichment hypothesis states that more varied experiences in a girl's life lead her to a less conventional view of her adult role, with work as an additional important feature in her life rather than a compensatory one. Their study, which examines amount and variety of students' past and present part-time work experience and the influence of occupational role models, supports the enrichment hypothesis. Sedney and Turner (1975) also find the enrichment

hypothesis more tenable in their study of women's career orientation, a concept closely related to but not identical with career salience.

Erickson and Nordin (1974) focus principally on the role of mothers of career salient college freshmen women, their mothers' work experience and feelings about their employment. Of interest to this review is the finding that a much larger percentage than expected--42% of the 248 freshmen women studied--gave what were scored as career salient responses on Angrist's Life Style Index (1972).

Despite the limited number of studies of career salience, the variety of research instruments, and some differences in value judgments and definitions, one trend can be inferred: the gap between the degree of career salience in men and women is narrowing. This conclusion is supported by recent reports on attitudes toward success and achievement, concepts closely related to career salience. Beery (1976) writes

> Among the students I counsel, the vast majority of the women are strongly career-oriented already and many of the men are beginning legitimately to question society's success expectations . . . . Attitudes toward success among college students today are far more complex than traditional sex-role stereotypes would suggest. (p. 500)

In her historical review of the changing career woman, Helson (1972) argues that "young women have apparently been sold on the desirability of planning for marriage and work, and interest in a career can no longer be attributed to a tiny, deviant minority" (p. 37).

It must be emphasized, however, that career orientation is not synonymous with career salience. It would be rare for a woman--or a man--to be career salient and not career oriented (though possible if the person is still in the fantasy stage of career development), but

students can be planning on and seriously interested in a career and yet not necessarily be considered highly career salient--their intended career may or may not rank high in their value systems.

Occupational Choice: Interests, Decidedness, Narrowness of Choice

Occupational Interests

Holland's theory (1958) of vocational choice as an extension of personality provides a useful model to test the hypothesis that test anxiety is too idiosyncratic to be related either to a particular academic field or to a particular personality type. The literature suggests that test anxiety develops from a complex number of factors, singly or in combination, such as a learned phobic reaction, motivational conflict, self-deprecatory feelings, and an introspective cognitive style. Career salience, on the other hand, although it is equally or more complex, is not as likely as test anxiety to be the result of past trauma. Some of the personality correlates of career salience reported in the previous section of this chapter may add up to a pattern which will correlate with one of Holland's six occupational types. The six types are used principally in the Vocational Preference Inventory (VPI) and the Self-Directed Search (Holland, 1973); they are also incorporated into the interpretation of the Strong Campbell Interest Inventory.

The investigative type is predicted to be correlated with career salience. Holland's (1975) clinical interpretation of high scorers on this scale is as follows:

> High scorers are concerned with science, mathematics, and theory. Prefer to "think through" problems rather than "act out" problems. Value science and aesthetic activities. Tend to be bright, scholarly, and persistent. Have high educational aspirations. (p. 10)

Holland also reports a moderate correlation between the Investigative type and need for achievement as measured by the Edwards Personal Preference Schedule (Holland, 1975, p. 26). Many of these personality correlates (as described by Holland) are also those reported by Greenhaus (1971) as correlates of career salience: e.g. self-rated effort, ambition, scholarship, and educational aspiration.

Decidedness of Career Choice

The literature in this area suggests a variety of attitudes toward undecided students, of definitions and measurement of undecidedness, and of characteristics of students in different stages of decision.

Ashby, Wall, and Osipow (1966) have investigated vocational certainty and indecision among college freshmen using several measures including students's self-descriptions according to Holland's types. Those who were relatively certain about their career plans tended to be students who described themselves as similar to the Intellectual (Investigative) and to the Artistic types.

Baird (1960) reviewed studies concerning undecided students and stated that "although the evidence is sparse, it suggests that the undecided student differs little from other students" (p. 430). In his study, Baird found no significant difference between the undecided student and the decided ones in academic aptitude. Baird concludes that

> There is no evidence to support the notion that most undecided students are maladjusted or abnormal. . . . . The freshman whose only problem is a lack of

> vocational decision can probably be helped to reach a decision, but he should be told that to be undecided about his career is not only common but may even be beneficial. (p. 433)

Lunneborg (1976) found that "undecideds had a significantly lower grade point average than decideds . . . and were far less satisfied with their university experience" (p. 402). In her discussion of these results, Lunneborg suggests that counselors may either continue to accept that a vocational choice in college is desirable and help students work toward one, or they may "accept that such a vocational choice is outmoded and help students to benefit from the university experience in ways not tied to work as Warnath (1975) urges" (p. 404).

Osipow, Carney, and Barak have recently (1976) developed a 19-item questionnaire as a measure of vocational indecision. This may lead to further research and clarification on this topic.

There appears to be nothing in the literature relating decidedness with test anxiety. Kimes and Troth (1974) have found that completely undecided students are higher in trait anxiety as measured by the State-Trait Anxiety Inventory. In their discussion, they imply no causal direction; they suggest that "it seems logical to assume that the individual must learn to cope with his anxiety before he can make effective career decisions" (p. 280).

Possibly, an undecided student prone to trait anxiety tries to alleviate anxiety by impulsively coming to a career decision, thus creating some order out of chaos. A threat, such as a test, to this new found security, can lead to a more specific anxiety over tests.

Narrowness of Choice

This construct, as such, has received little attention in the literature except through the positive connotation of commitment (e.g. Hershenson, 1968). What might be seen as an opposite pole from narrowness, flexibility, has been studied, however, in connection with career choice. In a study relating the trait of flexibility (as measured by the flexibility scale of the California Psychological Inventory) to college majors, Sherrick, Davenport, and Colina (1971) found that social science students were more flexible than were students in the natural sciences.

In the present study, narrowness of career choice is defined as the relative lack of openness toward alternate career options. It will be measured by the Acquiescence (Ac) Scale of Holland's VPI. The primary function of this scale is to detect unusual response patterns. It is also used in clinical interpretation described in the VPI Manual (1975) as follows:

> Subjects who prefer many occupations are expressing a sociable, cheerful, active, frank, and conventional outlook about the vocational world, whereas subjects who like only a few occupations are expressing an unsociable, depressive, and unconventional outlook. Many preferences are also associated with self-confidence; few preferences are associated with self-deprecation. Extremely high Ac scores are associated with poor judgment and lack of personal integration. (p. 13)

Haakenstad and Apostal (1971) found that "high-acquiescent subjects manifest an interest in 'extrovert' activities to a greater extent than do low-acquiescent subjects" (p. 501). In an earlier study, using the

number of like and dislike responses on the Strong Vocational Interest Blank, Berdie (1943) found some small correlations indicating that

> The person who likes more items tends to be a better student both in high school and college. . . . He tends to be more social and to have more social skills . . . and tends to have better morale. The person who dislikes many items tends to be a poorer student, has less ability, and has a less satisfactory social adjustment and morale. (pp. 182-183)

The hypothetical profile of the low-acquiescent person, inferred from these studies, appears to be consistent with many of the characteristics of the test anxious person as described in the literature reviewed earlier in this chapter.

CHAPTER III

METHODOLOGY

The main purpose of this study was to investigate the relationship between test anxiety and career salience. Also investigated were the occupational types, the degree of decidedness about career plans, and flexibility of career choice of high test anxious college students. A third question was: is there a difference in the proportion of males and females among high test anxious students as compared to that of low test anxious students? Another question was: are women as career salient as men? And finally, are high career salient students more frequently of Holland's Investigative type than are low career salient students? Subjects for this study were University of Florida students who either sought the services of its Reading and Study Skills Center or enrolled in a course entitled "Applied Techniques in Reading and Study Skills." A more precise description of the selection of subjects will follow a description of the Reading Center and of the Reading and Study Skills Course.

The Setting

The Reading and Study Skills Center

At the time this study took place the Center offered help in improving reading rate and comprehension and in developing study skills--including test taking strategies. The Center also offered individual and group

counseling for students with text anxiety. Participation in the Center's program was voluntary. Although students were referred by instructors and advisors, it was extremely rare that attendance was a condition for a grade. No credit was given for attendance or performance.

Procedure. Each program was individually planned by a counselor in conference with a student on the basis of results of a reading test and the student's own goals. Counselors were either members of the permanent staff with doctorates in counseling or reading, or were supervised graduate students, usually in Counselor Education. Students were able to begin or end their programs at the Center at any time during the quarter; a few students returned for more than one quarter. Upon application at the Center, each student was asked by the receptionist to complete a Personal Data Form (Appendix A), and during the time this study took place, the Mandler-Sarason Test Anxiety Scale (TAS, see Appendix B). The TAS, a 37-item true-false questionnaire takes about six minutes to complete and was added to the application procedure at the beginning of the 1976 academic year to determine whether a need existed for an expanded program in test anxiety. Among questions on the Personal Data Form of interest to this study are

(A) Career Plans (Check one of the following)

__1. I am completely undecided.

__2. I have a rather general but not specific idea of my career choice.

__3. I am fairly certain of my specific career choice.

__4. I am certain of my career choice.

and, later in the form

(B) I would like some help in controlling anxiety about tests: Yes _____ No _____

Description of students. Students using the Center represented a large variety of college students. About half were freshmen and the remaining half were fairly evenly distributed among sophomores, juniors, seniors, and graduate students. In academic ability, the students seemed fairly well divided among poor, average, and excellent. Formerly, approximately 250 students attended the Center each quarter. At the time of this study, however, because of funding problems, the Center had to limit students to approximately 150 per quarter.

The Center was chosen as a setting for this study for several reasons. First, it was a convenient source of cooperative, voluntary subjects who were under no constraint to participate in this study. Second, data from the TAS scores, self-reported decidedness of career choice, and need for help in reducing test anxiety were being routinely gathered and recorded. Third, students with high test anxiety were likely to come to the Center either for direct help with their problem or indirect help by seeking to improve academic skills. Finally, many recent studies suggest that test anxiety is more frequently reduced when the treatment includes study skills counseling (Allen, 1973) thus making a setting such as the Center a logical place both for conducting research on the problem and for developing more effective treatment programs.

The Reading and Study Skills Course

The course description follows:

> Instruction in reading and study skills will be offered on both an individual and group basis. Diagnostic tests, evaluation of skill levels and reading-study techniques will be considered. Class experiences will include lectures, discussions, demonstrations, and laboratory work. Topics include: reading rate and comprehension, vocabulary, note-taking, marking a text, time-use, concentration techniques, test anxiety, etc. Direct application of skills to coursework will be stressed. Intended for both successful students desiring to sharpen already adequate skills as well as those with identifiable problems. Enrollment limited to fifteen students with grading on a pass/fail basis.

This course, as may be seen from the description, is organized in the same way as was the Reading Center's regular program except that it is slightly more structured. It attracts the same type of student as did the Center. It is, of course, not unlikely that a few students register for the course primarily because it is pass/fail and fits their schedule. This, however, was not expected to be a significantly confounding problem in establishing the sample. Course students completed the Personal Data Form and the TAS as part of class routine. The total number of enrolled students was approximately 40.

The Sample

Students whose TAS score was 21 or above and who checked "Yes" to the Personal Data Form Statement: "I would like some help in controlling anxiety about tests" were designated high test anxious (HA) for purposes of this study. Those students whose TAS score fell at or below 13 and who checked "No" or left blank the statement regarding test anxiety were designated low test anxious (LA). The scores 0-13 and 21-31 correspond

to the lower and upper thirds respectively of the distribution of 60 TAS scores analyzed previously in a preliminary study at the Reading Center.

Collection of Data

Thirty names each of HA and LA students were randomly selected from a combined list of students registered at the Center and in the Study Skills course. Those students who were in the Center's program were contacted by a counselor and asked to participate in the study. Those students in the Study Skills course were contacted by their instructor, an advanced doctoral student in Counselor Education. The request was made approximately as follows: "If you can spare the time, would you mind filling out these two questionnaires. One of our research assistants (or "I am . . . .") is working on a study of values and vocational interests." Every effort was made to avoid any social or academic pressure to participate, and the students were assured that the results would be confidential. They were also told a report of the results would be available later. (For Consent Form, see Appendix C.)

The two instruments were the Ranked List of Life Values (RLLV, Appendix D) and Holland's Vocational Preference Inventory (VPI: Holland, 1973, p. 108-109). If a student did not want to participate or had dropped the program or course, another name from the list was drawn until 30 sets of data were collected for each of the two groups, HA and LA. Data collection took place primarily in the Winter quarter of 1977 and extended partly into the Spring quarter.

The Instruments

The Mandler-Sarason Test Anxiety Scale (TAS)

This instrument consists of 37 true-false items (Appendix B). It has been published in a paper by Sarason (1972) with a note that it may be used by researchers without the permission of the author or publisher (p. 384). It was also noted that this version is an expansion of a 21-item instrument used earlier (Sarason, 1958a). The shorter form of the TAS was developed from the college form of the Test Anxiety Questionnaire (TAQ), a 39-item rating scale format. Mandler and Cowen (1958) report a test-retest reliability of the TAQ of .91 (N=70) and a split-half reliability of .91 (N=100).

Stability over time for items on the TAS may be inferred from a study by Osipow and Kreinbring (1971). These investigators tested an instrument developed by Osterhouse (1969) which was composed of items selected from the TAS, from Alpert and Haber's (1960) instrument, and from a test developed by Spiegler, Morris, and Liebert (1968). Osipow and Kreinbring adapted Osterhouse's test to a true-false format and administered it twice, 10 days apart, to five different groups of students at different times throughout an academic quarter. Eight of the items on this composite instrument related to emotionality, nine to cognitive concern, and four were unscored fillers.

> The results suggest, first, that the test anxiety scale, both the worry and the emotionality components, is stable over at least a 10-week period and, second, that this stability is not disrupted by the situational input of variations and examinations stress. (Osipow & Kreinbring, 1971, p. 153)

In order to determine reliability and validity of the 37-item TAS for the sample being investigated in this study, a random sample of 30 students at the Reading Center was tested and retested after a period varying from 2½ to 4½ weeks; a product-moment correlation of .85 was obtained. Construct validity of the instrument--particularly in a counseling context--may be inferred from the fact that, of 60 students given the TAS (in a preliminary study to establish local norms), all of the high scoring 20 checked Yes to the Personal Data Form statement "I would like some help in controlling anxiety about tests"; whereas, of the low scoring 20 students, only one checked Yes.

In this preliminary study of 60 Reading Center students, the mean score was 17.5 with a standard deviation of 7.0 and a range of 0-31. The upper third of the distribution included the scores 21 through 31; the lower third, 0 through 13.

The Ranked List of Life Values

There have been three research instruments reported for the measurement of career salience. Kuhlen and Dipboye (1959) and Masih (1967) have used hour-long interviews with judges who rated the subjects into categories of high, medium, and low career salience according to their responses to open-ended questions about their career and life plans. Greenhaus (1971) developed a 28-item questionnaire with a 5-point Likert-type scale for the first 27 questions and a ranking method of response for the 28th. The items in the Greenhaus instrument consist of three general types according to whether they relate to (a) relative importance of a career, (b) planning and thinking, and (c) general attitudes

toward work. All items refer directly and obviously to "work," "job," or "career," e.g. "I intend to pursue the job of my choice, even if it leaves me little time for my religious activities." A third instrument currently used, Angrist's Life Style Index (1972) can be used only with women.

The interview technique is cumbersome and expensive, and Angrist's instrument is limited to use with women. Greenhaus' questionnaire is useful, but it was decided that a more indirectly worded instrument would yield less biased and self-conscious answers. In addition, only the relative-importance-of-career component is of interest to this study. For these reasons, the writer decided to develop a different instrument in which career would be simply ranked as one life value among many. This instrument (Appendix D), the Ranked List of Life Values (RLLV) is similar to the Rokeach Value Survey (1973) except that it contains 10 items instead of 18, and the items consist of statements instead of single words.

Development of the RLLV. The items on the RLLV were intuitively developed and then informally field tested with approximately 80 people; half were students in a community college class, and the remainder were interviewed either in small groups or individually. Each person was asked for suggestions and reactions; items were then added, deleted, and altered, accordingly, until the present form was established.

Reliability. To determine temporal reliability, the RLLV was administered to 60 students in an undergraduate psychology class on two occasions 3½ weeks apart. A Spearman rho rank correlation was calculated for

each person's pair of ranked lists. The median of these correlations is .85. The frequency of the correlations is shown in Table 1.

Table 1

RLLV Test-Retest, Frequency of Rank Correlations

(N=60)

Rank Correlation[a]	Frequency
.01- .10	2
.11- .20	0
.21- .30	1
.31- .40	1
.41- .50	4
.51- .60	5
.61- .70	3
.71- .80	7
.81- .90	22
.91-1.00	15

[a] Spearman rho rank correlation.

Table 2 indicates the test-retest Pearson correlation for each item. The range of .51 to .80 compares favorably with the item correlations obtained by Rokeach on Form D of .51 to .88 for terminal values and .45 to .70 for instrumental values (1973, p. 38). For the frequency distribution of rankings for each value item on the first administration of the RLLV, see Appendix E.

Validity. Construct validity was estimated by using the known-group method (Shaw, 1967, p. 19). The RLLV was administered to three groups expected to rank career at different levels of a value system. Kuhlen and Dipboye (1959) found prospective elementary school teachers to be lower in Career salience than students choosing other fields; Masih (1969) found

Table 2

Test-Retest Reliabilities of RLLV

(N=60)

Item	Pearson *r*
A . . . health . . .	.70
B . . . marriage . . .	.73
C . . . money . . .	.69
D . . . travel . . .	.64
E . . . career . . .	.69
F . . . friends . . .	.52
G . . . children . . .	.67
H . . . talent	.51
I . . . spiritual life . . .	.80
J . . . leisure . . .	.59

Note: All correlations significant at .001 level.

this true particularly of women education students. Therefore, a group of female students in the Childhood Education Program was chosen to represent a group predicted to be relatively low in career salience. Students are randomly assigned to sections, and three sections were tested with a total number of 31 women. For comparison, female law school students were expected to rank career higher and Mormon Church women were expected to rank it lower than the education group. (One of the tenets of the Mormon Church is that women should not work during child rearing years unless there is financial necessity.) The RLLV was given to 23 women law students attending a review class and to 20 randomly selected members of a Mormon Church group composed of both students and non-students. The results are shown in Table 3.

Table 3

Range, Mean, and Standard Deviation of Rank of Item E (Career) on the RLLV for Three Sample Groups

Group	Range	M	SD	N
1. Law Students	1- 8	3.22	2.07	23
2. Education Students	1- 9	4.81	1.85	31
3. Mormon Church Women	6-10	6.40	2.46	20

Note. Lower number denotes higher rank of career value.

A one way analysis of variance using the Student-Newman-Keuls procedure indicated that there are significant differences in the ranks assigned to "career" among the three groups.

The Vocational Preference Inventory (VPI)

The VPI measures personality types as an extension of vocational interests according to the number of Yes responses to a list of occupational titles which interest or appeal to the test taker. Interest scales are scored according to each of Holland's six personality types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. The VPI was developed by Holland (1958) and has been revised several times. The form used in this study was the sixth revision, consisting of 160 occupational titles scored according to the six interest scales and, also, five additional scales: Self-Control, Masculinity, Status, Infrequency, and Acquiescence.

Only the six interest scales and the Acquiescence Scale (Ac Scale) were used in this study. The Ac Scale measures the tendency of the test taker to "like" occupations by counting the number of "Yes" responses for items 1-30, and was used in this study as an indication of relative breadth of occupational interest. A person scoring low on the Ac Scale is presumed to be relatively narrow regarding career choice.

Reliability. Internal consistency coefficients (Kuder-Richardson 20) for the six interest scales range from .83 to .89 for 6,289 college men and .76 to .88 for 6,143 college women. A correlation of .76 is reported for the Ac Scale on both male and female samples. Test-retest stability is reported to range from .61 to .86 on the interest scales, and is .93 for the Ac Scale (Holland, 1975, p. 8).

Validity. Regarding construct validity of the six interest scales, Holland (1975) states the following:

> Making Vocational Choices (Holland, 1973) summarizes more than 100 empirical studies about the characteristics attributed to the first six VPI scales, or to people categorized as one of the six types. More than 90 of these investigations are believed to yield positive evidence. (p. 19)

Regarding the Ac Scale, Holland (1975) reports that it

> . . . provides an estimate of the subject's tendency to respond "Like" or "Yes." It is scored by counting the number of "Yes" responses for items 1-30. The first 30 items are believed to provide a useful estimate of the tendency to say "Yes." In the third revision, "liking" items 1-30 correlated .74 with "liking" items 31-300 for boys, and .69 for girls (N's = 100). In the sixth revision, the number of preferred items among the first thirty items correlates .43 to .51 with scales consisting only of items keyed "Yes." (p. 18)

Hypotheses and Analysis of Data

The following hypotheses were generated from the research questions asked in Chapter I (pp. 11-12). Stated in null form, Hypothesis 1: There is no difference in the degree of career salience between HA and LA students.

The degree of career salience was measured by the rank assigned to Item E on the RLLV. This rank is assumed to have the properties of a normally distributed score. The *t*-test to determine a significant difference between two sample means was used to test the hypothesis, ($p < .05$).

Hypothesis 2. There is no difference in the narrowness of choice between HA and LA students.

Narrowness of choice was measured by the Acquiescence Scale (Ac Scale), i.e. the number of "Yes" responses checked on the first 30 occupational

titles of the VPI. The t-test to determine a significant difference between two sample means was used to test the hypothesis, ($p < .05$).

Hypothesis 3. There is no difference in the decidedness of career choice between HA and LA students.

Decidedness of career choice was determined by whether or not a student checked "I am certain of my career choice" on the Personal Data Form. The chi square test for two independent samples was used to determine a significant difference at the $p < .05$ level.

Hypothesis 4. There are no relationships between any of Holland's six occupational types and HA and LA students.

Raw scores on each of the six occupational scales of the VPI were used to measure occupational type. T-tests were used to determine whether or not a significant difference exists between the means of HA and LA students on each of the six scales.

Hypothesis 5. There is no difference in the frequency of men and women found in the HA and LA groups.

The chi square test for two independent samples was used to determine a significant difference at the $p < .05$ level.

The following two hypotheses relate to predicted characteristics of career salience. Because of the growing trend toward a greater career orientation among women, it was hypothesized that among students at the Reading Center, women would be as career salient as men. Stated in the form of a null hypothesis:

Hypothesis 6. There is no difference in the degree of career salience between male and female students.

The t-test to determine the difference between two sample means was used to test the hypothesis at the $p < .05$ level.

Finally, because career salience has been reported to be correlated with self-rated effort, ambition, scholarship, and educational aspiration (Greenhaus, 1971) and these qualities are also among the characteristics of the Investigative type, it was predicted that there is a significant relationship between career salience and Holland's Investigative type. There appeared, however, to be no reason to predict a relationship with any of the other five types. Stated, then, in the form of a null hypothesis:

Hypothesis 7. There is no correlation between career salience and any of Holland's six occupational types.

Career salience is measured by the number, from 1 to 10, assigned to Item E on the RLLV. Holland's occupational types (Realistic, Investigative, Social, Conventional, Enterprising, and Artistic) are measured by their scales on the VPI with scores ranging from 0 to 14. The Pearson r was used to test this hypothesis at the $p < .05$ level for each of the six scales.

Limitations

The results of this study cannot necessarily be applied to other university populations because of differences, for example, in orientation toward academic achievement and in attitudes toward the function of higher education. Furthermore, because of fluctuating economic and cultural conditions, these are years of rapidly changing attitudes toward work, in general, and toward different career fields, in particular. These changes are affecting students irrespective of sex; in addition,

other cultural forces are affecting men and women in different ways. For these reasons, interpretation of results must take into account the limits of both time and place.

More specifically, although the Reading Center served a wide variety of students and therefore provided a good cross section of the college population for the sample, approximately half of its usual enrollment were Freshmen. And although students at the Center represented a broad spectrum of academic ability and motivation, it can be assumed that it did not include students completely apathetic toward academic success.

Follow-up of Subjects

As soon as possible, each VPI was scored and plotted on the male or female profile chart provided with the instrument. The profiles indicate a student's percentile rank based on national Freshmen norms. For purposes of interpretation, each student's occupational type was determined by the highest score on the profile. Each student received a cover letter (Appendix F) attached to a description of Holland's six occupational types with his or her high point type indicated. In the case of ties or near ties, this was also noted. Those students requesting a more extensive interpretation were seen individually by the principal investigator or another counselor.

CHAPTER IV

RESULTS

Following a brief description of the sample, the results of the data analyses will be presented for each hypothesis. The results will then be summarized. Finally, additional findings will be presented.

Description of the Sample

All students in the sample were undergraduates. With the exception of one student who was 38, the age range was 18-24. The mean age was 19.8 and the modal age was 18. Of the total number of 60 students, 28 were women and 32 were men.

Analysis of Data

In the analyses that follow, HA and LA refer to high test anxious and low test anxious students respectively. Career Salience (CS) is determined by the rank assigned to the career item on the Ranked List of Life Values (RLLV). Ranks range from 1-10 with 1 as the highest value. Narrowness of choice is measured by the Acquiescence Scale (Ac Scale) of the Vocational Preference Inventory (VPI). Possible scores range from 0 to 30.

Hypothesis 1. There is no difference in the degree of career salience between HA and LA students.

This hypothesis was tested by a t-test for a significant difference between two sample means at the .05 level of confidence. The results are shown in Table 4.

Table 4

T-Test Comparison of Rank of Career Item and Low and High Test Anxious Students

Group	N	Mean	s.d.	t	d.f.
Low Anxious	30	4.40	2.34	-0.58*	58
High Anxious	30	4.73	2.13		

Note. Lower number denotes higher ranking of value
* Not significant at the .05 level.

The hypothesis is retained. The data indicate that no significant difference exists. Although a conclusion that no difference exists must always be a tentative one, a comparison of the means, standard deviations, and frequency distributions indicate close similarity of career salience between HA and LA students as measured by these particular instruments. The frequency distributions are presented in Table 5.

Table 5

Frequency Distribution of Ranks for Career Item on the RLLV for Low and High Test Anxious Students

	Rank										
Group	1	2	3	4	5	6	7	8	9	10	
Low Anxious	4	3	6	4	1	4	5	3	0	0	N=30
High Anxious	3	1	5	5	4	6	3	2	1	0	N=30

Note. Lower number denotes higher ranking of value.

The frequency distributions show a wide range for both groups. Both distributions appear relatively flat and slightly bimodal. The frequency distributions for all ten value items for these 60 students are given in Appendix G.

Hypothesis 2. There is no difference in the narrowness of choice between HA and LA students.

This hypothesis was tested by a t-test for a significant difference between two sample means at the .05 level of confidence. The results are shown in Table 6.

Table 6

T-Test Comparison of VPI Ac Scale Score and Low and High Anxious Students

Group	N	Mean	s.d.	t	d.f.
Low Anxious	30	8.87	4.26	-1.97*	58
High Anxious	30	10.90	3.72		

* Significant at the .05 level

The hypothesis is rejected. There is a significant difference between two sample means. It should be emphasized, however, that the t value is in the opposite direction to that predicted.

Hypothesis 3. There is no difference in the decidedness of career choice between HA and LA students.

Students who checked "I am certain of my career choice." on the Personal Data Form (Appendix A) were designated decided. Those students who checked any of the other three statements concerning career plans were designated non-decided. The chi square test for two independent samples was used to test this hypothesis at the .05 level of significance. The results are presented in Table 7.

Table 7

Chi Square Analysis of Decidedness of Career Choice by High and Low Test Anxious Students

	Low Test Anxious	High Test Anxious	Row Total
Decided	8	10	18
Non-decided	22	20	42
Column Total	30	30	60

Chi Square = .079 d.f. = 1

The hypothesis is retained. The data indicate that there is no difference in decidedness between LA and HA students. This indication must be considered cautiously, however, not only because of the problem of proving the absence of relationship but also because decidedness, in this study, is measured simply by responses on a questionnaire.

Hypothesis 4. There are no relationships between any of Holland's six occupational types and HA and LA students.

This hypothesis was tested by six t-tests for significant differences between two sample means. The results are shown in Table 8.

Table 8

T-Test Comparisons of Holland's Six Occupational Types and Low and High Test Anxious Students

Occupational Type	N	Mean	s.d.	t*	d.f.
Realistic					
LA	30	1.87	1.70	-1.00	58
HA	30	2.40	2.39		
Investigative					
LA	30	3.93	4.54	-1.33	58
HA	30	5.43	4.17		
Social					
LA	30	4.83	3.58	-0.74	58
HA	30	5.53	3.71		
Conventional					
LA	30	1.67	2.66	-1.38	58
HA	30	2.67	2.95		
Enterprising					
LA	30	3.60	3.92	-0.80	58
HA	30	4.40	3.80		
Artistic					
LA	30	4.70	4.19	-1.01	58
HA	30	5.83	4.52		

* None is significant at the .05 level.

The hypothesis is retained. According to this analysis of the data, there are no relationships between test anxiety and any of Holland's occupational types. It will be noted that the means for the LA group are all lower than those of the HA group; this can be assumed to be a function of the lower Ac Scale scores of the LA students.

Hypothesis 5. There is no difference in the frequency of men and women found in the LA and the HA groups. The chi square test for two independent samples was used to test this hypothesis at the .05 level of significance. The results are presented in Table 9.

Table 9

Chi Square Analysis of Male and Female Low and High Test Anxious Students

	Low	High	Row Total
Female	13	15	28
Male	17	15	32
Column Total	30	30	60

Chi Square = .067 d.f. = 1

The hypothesis is retained. The data collected from these samples suggest that women are as subject to test anxiety as are men.

Hypothesis 6. There is no difference in the degree of career salience between male and female students.

This hypothesis was tested by a t-test for a significant difference between two sample means at the .05 level of significance. The results are presented in Table 10.

Table 10

T-Test Comparison of Rank of Career Item and Male and Female Students

Group	N	Mean	s.d.	t	d.f.
Female	28	4.25	2.05	-1.03*	58
Male	32	4.84	2.37		

Note. Lower number denotes higher rank of career value.

* Not significant at the .05 level.

The hypothesis is retained. There appears, from these data, to be no significant difference in career salience (as measured by the RLLV) between male and female students. Of further interest are the frequency distributions shown in Table 11.

Table 11

Frequency Distribution of Ranks for Career Item on the RLLV for Male and Female Students, Reading Center Sample

	Rank										
Sex	1	2	3	4	5	6	7	8	9	10	
Female	3	3	6	3	3	6	3	1	0	0	N=28
Male	4	2	5	6	2	4	4	4	1	0	N=32

Note. Lower number denotes higher ranking of value.

A comparison of the means, standard deviations, and distributions indicate a close similarity in the way men and women rank career as a personal value in this particular sample. For a comparison of how these students rank all ten values of the RLLV, see Appendix H.

Hypothesis 7. There is no correlation between career salience and any of Holland's occupational types. The Pearson r was used to test this hypothesis at the .05 level of significance. The results are presented in Table 12.

Table 12

Pearson Correlation Coefficients between RLLV Rank of Career Item and Holland's Occupational Types

Realistic	.01
Investigative	.02
Social	.01
Conventional	.19
Enterprising	.03
Artistic	-.07

Note. On the RLLV, lower numbers denote higher values. Therefore, correlations are in the opposite direction to those in table.

Note. None is significant at the .05 level

The hypothesis is retained. There appears to be no correlation between career salience, as measured by the RLLV, and any of Holland's occupational types, as measured by raw scores. For correlations of all RLLV values with the six VPI scales, see Appendix I which presents a correlation matrix for the total sample and one for each sex.

Summary

Contrary to the prediction of the experimenter, the principal research hypothesis that career salience is related to test anxiety was not supported by the data. Analysis of the data indicated that low test anxiety is related to narrowness of choice, as measured by the VPI Ac Scale. This finding is opposite to that predicted. Also contrary to prediction, no relationship was found between test anxiety and decidedness of career choice.

The data collected in this sample supported the predictions that women are as subject to test anxiety as are men, and that women rank career as a personal value as highly as do men. It was also found, as predicted, that no significant relationship could be determined between test anxiety and any of Holland's six occupational types.

It was predicted that a correlation would be found between career salience and Holland's Investigative type, but would not be found for the other five types. The data, however, indicated that there were no significant correlations between career salience and any of the six types.

With the exception of the significant relationship found between low test anxiety and narrowness of choice, none of the null hypotheses was rejected. This was in some cases consistent with the experimenter's prediction and in others not consistent. It should be stressed that, regardless of prediction, findings concerning the absence of relationships must be interpreted with more caution than can positive results.

Table 13

Means and Standard Deviations of VPI Scores of Low and High Test Anxious Men and Women

	Men			Women		
VPI Type	Mean	s.d.	N	Mean	s.d.	N
Realistic						
LA	2.82	1.55	17	0.62	0.86	13
HA	3.27	2.96	15	1.53	1.19	15
Investigative						
LA	5.29	4.82	17	2.15	3.58	13
HA	4.13	3.44	15	6.73	4.54	15
Social						
LA	5.71	3.93	17	3.69	2.81	13
HA	5.40	3.91	15	5.67	3.64	15
Conventional						
LA	2.41	3.14	17	0.69	1.44	13
HA	3.53	3.42	15	1.80	2.18	15
Enterprising						
LA	4.71	4.59	17	2.15	2.23	13
HA	5.53	3.67	15	3.27	3.71	15
Artistic						
LA	6.00	4.80	17	3.00	2.48	13
HA	4.93	4.70	15	6.73	4.30	15

Table 14

Summary Table for Analysis of Variance for Realistic Score by Sex and High and Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value
Test Anxiety	1	6.595	6.595	1.942
Sex	1	57.615	57.615	16.962*
Interaction	1	.838	.838	.247
Within	56	190.214	3.397	

* Significant at .05 level.

Table 15

Summary Table for Analysis of Variance for Investigative Score by Sex and High and Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value
Test Anxiety	1	34.333	34.333	1.962
Sex	1	.888	.888	.051
Interaction	1	122.457	122.457	6.998*
Within	56	1136.979	17.498	

* Significant at .05 level.

Table 16

Summary Table for Analysis of Variance for Social Score by Sex and High Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value*
Test Anxiety	1	8.570	8.570	.647
Sex	1	11.078	11.078	.837
Interaction	1	19.323	19.323	1.460
Within	56	741.228	13.236	

* None is significant at .05 level.

Table 17

Summary Table for Analysis of Variance for Conventional Score by Sex and High and Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value
Test Anxiety	1	18.568	18.568	2.518
Sex	1	44.312	44.312	6.008*
Interaction	1	.001	.001	.000
Within	56	413.017	7.375	

* Significant at .05 level.

Table 18

Summary Table for Analysis of Variance for Enterprising Score by Sex and High and Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value
Test Anxiety	1	13.778	13.778	0.992
Sex	1	86.209	86.209	6.206*
Interaction	1	0.303	0.303	0.022
Within	56	777.884	13.891	

* Significant at .05 level.

Table 19

Summary Table for Analysis of Variance for Artistic Score by Sex and High and Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value
Test Anxiety	1	20.508	20.508	1.137
Sex	1	4.975	4.975	0.276
Interaction	1	85.625	85.625	4.748*
Within	56	1009.862	18.033	

* Significant at .05 level.

Table 20

Summary Table for Analysis of Variance for Career Salience by Sex and High and Low Test Anxiety.

Source of Variance	d.f.	Sum of Squares	Mean Square	F Value*
Test Anxiety	1	2.095	2.095	.419
Sex	1	5.693	5.693	1.138
Interaction	1	5.112	1.021	1.021
Within	56	280.260	5.005	

* None is significant at .05 level.

Table 21

Means and Standard Deviations of Rank of Career Item, RLLV, for Low and High Test Anxious Men and Women.

	Men			Women		
Group	Mean	s.d.	N	Mean	s.d.	N
LA	4.41	2.32	17	4.38	2.47	13
HA	5.33	2.41	15	4.13	1.68	15

Note. Lower number denotes higher ranking of value.

Table 22

Means and Standard Deviations of Acquiescence Scores for Low and High Test Anxious Men and Women.

	Men			Women		
Group	Mean	s.d.	N	Mean	s.d.	N
LA	10.65	4.53	17	6.54	2.47	13
HA	10.33	3.94	15	11.47	3.54	15

Additional Findings and Analyses

It was of interest to compare the mean Occupational Scale scores with those reported for the normative sample (6290 college freshmen men and 6143 women) in the VPI manual (Holland, 1975, p. 29). To do this, it was necessary to compute the means and standard deviations in the sample being investigated for men and women separately. These data are presented in Table 13. After noting the disparity in the women's Investigative and Artistic Scale scores, it was decided to analyze the data further to determine if there could be a significant interaction between sex and test anxiety for career salience and Holland's six occupational types. The results of these analyses are presented in Tables 14 to 20.

Regarding Realistic, Conventional, and Enterprising Scores (Tables 14, 17, and 18 respectively) only sex effect is indicated--to be expected in the VPI scales. It is noteworthy that the Social Score (Table 16) does not indicate a sex effect; Holland reports means of 4.5 for men, and 8.1 for women in the normative sample given in the VPI manual (1975,

p. 29). Significant interaction effects (.05 level) between test anxiety and sex are found for the Investigative (Table 15) and the Artistic Score (Table 19). The results presented in Table 20 indicate no significant interaction effects for the career salience variable. Means and standard deviations are shown in Table 21.

The Ac Scale data were also re-examined and the means and standard deviations computed separately for men and women. The results are shown in Table 22. It is recalled that a significant difference was found between the sample means of the Ac Scale for LA and HA students (Table 6). The results in Table 22 suggest that for the sample under investigation, the source of the difference in means is the subgroup of LA women. In the VPI manual (1975, p. 29), Holland reports an 11.6 Ac Scale mean for men and an 11.7 mean for women with a standard deviation of 4.8 for both sexes. A comparison of Holland's figures with those reported in Table 22 further suggests that the LA women differ not only in their Ac Scores but also in the degree of homogeneity because of the relatively small standard deviation. These observations are, of course, only tentative suggestions because of the small sizes of the subgroups in this study.

CHAPTER V

DISCUSSION AND CONCLUSIONS

This chapter will begin with a brief summary of the study to this point, will then discuss the results, and will conclude with implications of the results and suggestions for further research.

Summary

The principal reason for undertaking this study was to test a hypothesis that there is a relationship between career salience and test anxiety. This hypothesis was developed from the writer's clinical observations and from Rollo May's theory of anxiety, i.e. that anxiety stems from a threat to a value which a person perceives as essential to his or her existence as a personality.

The writer developed the Ranked List of Life Values (RLLV) as an instrument to measure career salience (Appendix D). This instrument asks the subjects to imagine themselves to be 80 years old and reflecting on a full and satisfying life. They are then asked to rank ten items, given in statement form, in order of importance. Among the statements of values to be ranked is "I have had a satisfying career in an occupation of my choice." The rank, from 1 (highest value) to 10, assigned to this item is designated as the score for career salience. In pilot study with 60 students, the RLLV's were found to have a median test-retest (3½ weeks) correlation of .85 using the Spearman rho coefficient. Pearson correlations for item stability over this three and a half week period ranged from .51 (for "I have achieved recognition for my talent") to .80 (for "I have experi-

enced the enrichment of the spiritual nature of life"). The career item had a Pearson r of .69. As an indication of validity, the RLLV was found to discriminate significantly among three groups of persons logically presumed to differ regarding the value of a career.

The RLLV and the Mandler-Sarason Test Anxiety Scale (TAS) were used with a sample of students from the University of Florida's Reading and Study Skills Center to test the principal hypothesis. Reading Center students represent a good cross section of college students, with the reservation that they presumably do not include students completely apathetic toward academic success, and are mainly from the lower division. Otherwise, they are a nearly ideal choice since they consist of voluntary and cooperative subjects, and the Reading Center is an appropriate setting for the investigation of test anxiety.

As corollaries to the principal hypothesis that career salience would be related to test anxiety, it was predicted that test anxiety would also be related positively to narrowness of career choice and to decidedness of career choice. Neither of these relationships was found. It was found, however, that test anxiety was negatively related to narrowness of choice at the .05 level of significance. In other words, low test anxious (LA) students scored significantly lower on the VPI Acquiescence (Ac) Scale than did high anxious (HA) ones.

It was also hypothesized that test anxiety would not be related to a particular type of career; specifically, to any of Holland's six occupational types. This hypothesis was upheld by the data. However, comparison of the Occupational Scale means with those of the VPI normative sample (Holland, 1975, p. 29) led to a decision to analyze the data

further to determine if there might be an interaction effect between sex and test anxiety for the six types. These interactions were found for the Investigative and the Artistic Scores.

Because of cultural changes in attitudes of women toward achievement and careers, it was hypothesized that women would be as frequently test anxious as are men and as career salient as are men. Both of these hypotheses were upheld by the data.

Finally, it was hypothesized that career salience would be related to only one of Holland's occupational types, the investigative type. This was not upheld by the data. There appears to be no relationships between career salience and any of Holland's six occupational types, as measured by the instruments used in this study.

Discussion

It was stated in the first chapter that the purpose of this study was to discover whether some personal observations of test anxious students would be confirmed in a controlled inquiry. The data gathered in this study do not support the hypothesis derived from the observed facts.

One explanation of this result is that the correlates and antecedents of test anxiety are too numerous and complex for a single factor such as career salience to be isolated. Furthermore, this particular factor might have appeared more important than it actually is because it is the type of personal problem that a client will easily discuss. Loss of one's career goal must appear to be the most obvious consequence of poor performance on tests.

It may be that ambivalence toward success and learned anxiety over evaluation, often results of childhood traumas, are the major

antecedents of test anxiety. These problems, however, are unlikely to be perceived by the client and are, perhaps, even less likely to be acknowledged or discussed. This supposition is consistent with Sarason and Koenig's (1965) findings that high test anxious (HA) students made significantly fewer negative statements about their parents than did low test anxious (LA) students. It seems probable that the more a person must suppress feelings about parental conflicts, the more he or she might talk about other subjects in a counseling situation. Career plans, including decidedness, intensity of commitment, and place among life values, are safe problems for discussion and may, if talked about intensely enough, serve as a barricade to prevent access to more threatening topics.

As noted earlier, Hypothesis 2 concerning test anxiety and Holland's Acquiescence (Ac) Scale was rejected but in the opposite direction to that predicted. The mean Ac score of the HA group was 10.90; that of the LA group was 8.87. Comparing these means with those Holland reports in the VPI manual (1975, p. 29), it is the low anxious group that deviates more from his 11.6 mean for 6290 college freshmen men and 11.6 mean for 6143 college freshmen women. (Standard deviation is 4.8 for both sexes.) A study using a larger number of subjects to establish local norms would, of course, be necessary to determine the statistical significance of this apparent trend.

One explanation for this trend of low anxious students to say "Yes" to fewer occupations is that it is a function of response style. A "No, not interested" attitude toward occupations may be correlated with a "No,

nothing's wrong with me" attitude in completing the Test Anxiety Scale. However, a breakdown of the data by sex and an examination of the means suggested that this lower Ac Scale trend is confined to LA women (see Table 22). A t-test indicates that the mean of the LA women's group is significantly lower than that of the HA women (t = -4.20, d.f. = 26, $p < .001$). On the other hand, the LA subgroup appears to rank career as highly as do the HA women (see Table 21).

One possible explanation for this apparent contradiction might be suggested by the following hypothetical portrait. The LA woman might be seen as a student who values career as one of her life goals as highly as do other students, but in a more abstract way. Whether from social pressure or from realistically perceived necessity, a career with the personal and economic independence it apparently promises has become an important part of her future. But perhaps she is still relatively naive about occupational titles and therefore omits many items or checks "no" to many of them. And, finally, she is not particularly concerned with either test performance or with expanding her range of career choices to a realistic breadth. This is, of course, a highly speculative and tentative picture. Another study with a larger number of subjects, using local and current Ac Scale norms, and examining other variables would be necessary for a more valid interpretation.

Hypothesis 3, concerning decidedness of career choice, was retained contrary to prediction. According to the data, LA students are as frequently decided as are HA ones. When further investigation analyzed the data for each sex separately, a trend was noted for HA women to be more frequently decided in career choice than LA women or than either subgroup

of men. This trend was not found significant at the .05 level, however. This might be due to the insensitivity of the measure.

Hypothesis 4, that test anxiety is not related to any of Holland's six occupational types, was retained as predicted. The results suggested that test anxiety is too idiosyncratic to be related to particular career choices, at least as measured by VPI raw scores.

More complex patterns were found, however, when the data were further analyzed by sex. Significant interactions between sex and test anxiety for the Investigative and the Artistic types were found. On both scales, HA women scored significantly higher than did the LA women (Investigative: $t = -2.93$, d.f. = 26, $p < .01$; Artistic: $t = -2.75$, d.f. = 26, $p < .01$). Significant differences were not found (.05 level) between the means of the LA and HA men on either of these scales. Further research is needed to confirm these findings and to offer tenable explanations of these interactions. In these days of rapidly changing attitudes toward careers, both in general and in particular, entirely new patterns may be forming and much speculation as to cause and effect would be premature.

Hypothesis 5, that women are as frequently test anxious as men, was retained, as predicted. Test anxiety appears to be too much an individual personal problem to be related to sex. It may also indicate that with the changing cultural pressures, women are acquiring some of the success neuroses formerly thought of as the exclusive property of men. Hypothesis 6 is concerned with the relationship of career salience to sex. As predicted, no relationship was found. This is consistent, as are the results supporting Hypothesis 5, with the conclusions of Beery (1975,

1976) and Helson (1972) that the gap is narrowing between men and women's attitudes toward achievement and the value of a career.

The seventh hypothesis considered the relationship between career salience and Holland's six occupational types. It was predicted that of the six types, only the Investigative type would be positively correlated with career salience. This relationship was not found, contrary to prediction. Some of the correlates of career salience reported by Greenhaus (1971), e.g. ambition and self-rated effort, had seemed to form a profile similar to Holland's description of the Investigative type. Such constructs, however, are probably too nebulous and too subject to different interpretations to have justified the prediction.

Perhaps the most positive aspect of this study was the development of the Ranked List of Life Values (RLLV) as a measure of career salience. It is simple to administer and takes about six to eight minutes to complete. Attrition caused by not following directions (e.g. assigning ties or substantially changing the wording of an item) was extremely low. And, finally, students seemed to enjoy the exercise for its own sake.

Conclusions

Implications for Counseling

In a time of rapid change of occupational patterns and in attitudes toward work and careers, a simple instrument such as the RLLV would seem useful for longitudinal, cultural, and demographic studies of career salience. The RLLV may also be useful in measuring other values, or simply as an exercise in value clarification in individual, couple, or group counseling.

The main implication for the counseling profession concerns the treatment of test anxious students. There appears to be no relationship between test anxiety and career salience, and although the counselor might discuss career plans with a test anxious client routinely, it would appear that the principal emphasis should remain in developing study skills. Such training will lead, first of all, to greater academic competence. In addition, if short, timed, test-like exercises are assigned with careful attention to an appropriate level of difficulty, the test anxious student will experience repeated successes and thus develop greater confidence and sense of mastery. As the review of literature suggests, an effective treatment for test anxiety would also include, ideally, group counseling and, if appropriate, relaxation training.

Finally, the indication found in this study that women are as frequently test anxious and career salient as are men should reinforce the present attempts to avoid sex stereotypes and bias in personal and vocational counseling. The trends found in the further analyses of data by sex should add to counselors' awareness of changing career patterns among both men and women.

Implications for Future Research

The RLLV was found to be useful in this study and could prove valuable in research and counseling. It would have greater value if norms were established for the general population and for various subgroups. As a counseling technique, its usefulness might be investigated in a wide range of settings by asking counselors and clients to evaluate its effectiveness in value clarification. Intercorrelations among the value items

might be of interest. These have been computed for the psychology class sample used for the preliminary reliability study. The item correlations are presented in Appendix J.

In this study, the VPI raw scores were used to measure the six occupational types. Optionally, types may be identified by classification of stated career choice or by college major. Either of these methods would be faster and simpler to use and, therefore, make the use of a larger sample more feasible.

Perhaps the most important direction for future research lies in the replication of several aspects of this study, with samples large enough to break the data down by sex in order to examine it for interaction effects. This could prove valuable, particularly in investigating the emerging patterns of career attitudes and development among college women.

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APPENDIX A

PERSONAL DATA FORM

PERSONAL

Present Marital Status: Single__ Engaged__ Married__ Divorced__ Widowed__
Sex and ages of your own children_____
Number of older brothers_____ Number of younger brothers_____
Number of older sisters_____ Number of younger sisters_____

ACADEMIC

Where did you attend high school?_____
Have you received special help in reading?_____ When?_____
Mother's occupation_____ Father's occupation_____
Mother's education_____ Father's education_____

What school(s) have you attended since high school graduation?_____
_____
If you are an entering freshman, what was your grade point average your last year in high school?_____
What was your grade point average last quarter?_____
Cumulative grade point?_____
Are you on probation?_____

What courses are you taking now?

Title	Credit
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

CAREER PLANS (Check one of the following)

_____ 1. I am completely undecided
_____ 2. I have a rather general but not a specific idea of my career choice.
_____ 3. I am fairly certain of my specific career choice.
_____ 4. I am certain of my career choice.
If you check 2, 3, or 4, please state your career choice:_____
_____

If working, how many hours per week?_____ What kind of work?_____

Briefly state why you have come to the Reading and Study Skills Center._____
_____
_____
_____

I would like some help in controlling anxiety about tests: Yes_____ No_____

APPENDIX B

MANDLER-SARASON TEST ANXIETY SCALE

Name:_____ Date:_____

MANDLER-SARASON SCALE

Please mark appropriate column with an X. Please answer all questions.

True	False		
☐	☐	1.	While taking an important exam I find myself thinking of how much brighter the other students are than I am.
☐	☐	2.	If I were to take an intelligence test, I would worry a great deal before taking it.
☐	☐	3.	If I knew I was going to take an intelligence test, I would feel confident and relaxed, beforehand.
☐	☐	4.	While taking an important examination I perspire a great deal.
☐	☐	5.	During course examinations I find myself thinking of things unrelated to the actual course material.
☐	☐	6.	I get to feel very panicky when I have to take a surprise exam.
☐	☐	7.	During tests I find myself thinking of the consequences of failing.
☐	☐	8.	After important tests I am frequently so tense that my stomach gets upset.
☐	☐	9.	I freeze up on things like intelligence tests and final exams.
☐	☐	10.	Getting a good grade on one test doesn't seem to increase my confidence on the second.
☐	☐	11.	I sometimes feel my heart beating very fast during important tests.
☐	☐	12.	After taking a test I always feel I could have done better than I actually did.
☐	☐	13.	I usually get depressed after taking a test.
☐	☐	14.	I have an uneasy, upset feeling before taking a final examination.
☐	☐	15.	When taking a test my emotional feelings do not interfere with my performance.
☐	☐	16.	During a course examination I frequently get so nervous that I forget facts I really know.

APPENDIX B Continued

True	False		
☐	☐	17.	I seem to defeat myself while working on important tests.
☐	☐	18.	The harder I work at taking a test or studying for one, the more confused I get.
☐	☐	19.	As soon as an exam is over I try to stop worrying about it, but I just can't.
☐	☐	20.	During exams I sometimes wonder if I'll ever get through college.
☐	☐	21.	I would rather write a paper than take an examination for my grade in a course.
☐	☐	22.	I wish examinations did not bother me so much.
☐	☐	23.	I think I could do much better on tests if I could take them alone.
☐	☐	24.	Thinking about the grade I may get in a course interferes with my studying and my performance on tests.
☐	☐	25.	If examinations could be done away with I think I would actually learn more.
☐	☐	26.	On exams I take the attitude, "If I don't know it now there's no point worrying about it."
☐	☐	27.	I really don't see why some people get so upset about tests.
☐	☐	28.	Thoughts of doing poorly interfere with my performance on tests.
☐	☐	29.	I don't study any harder for final exams than for the rest of my course work.
☐	☐	30.	Even when I'm well prepared for a test, I feel very anxious about it.
☐	☐	31.	I don't enjoy eating before an important test.
☐	☐	32.	Before an important examination I find my hands or arms trembling.
☐	☐	33.	I seldom feel the need for "cramming" before an exam.

APPENDIX B Continued

True	False		
☐	☐	34.	The University ought to recognize that some students are more nervous than others about tests and that this affects their performance.
☐	☐	35.	It seems to me that examination periods ought not to be made the tense situations which they are.
☐	☐	36.	I start feeling very uneasy just before getting a test paper back.
☐	☐	37.	I dread courses where the professor has the habit of giving "pop" quizzes.

APPENDIX C

INFORMED CONSENT FORM

Informed Consent Form

University of Florida
Gainesville, 32611

Reply To

Reading and Study Skills Center
141 Building E

To the student:

I am collecting information for a study relating personal values to occupational interests. I would appreciate it if you would take the time to complete the two attached forms. When I have completed the study, I will let you know the results and I, or one of the other counselors, will be glad to discuss them with you or answer any of your questions.

Participation is completely voluntary, so if for any reason you would rather not take part in this project, please feel free to say so. Furthermore, you may withdraw at any time. Your answers will be strictly confidential and will be used for statistical purposes only.

Thank you,

Margaret Green
Principal Investigator

I have read and understand the procedure described above. I agree to participate in the procedure and I have received a copy of this description.

_____ _____

Date Signature of Student

APPENDIX D

RANKED LIST OF LIFE VALUES

Ranked List of Life Values

Imagine that it is your 80th birthday. You have just stated in an interview that you have had a full and satisfying life. The reporter asks you to give some specific reasons. Rank the following examples of reasons according to importance to you. Assign #1 to what you imagine will be the most important factor in an ideal life for you, #2 to the next, and so on to #10 to the least important. Please do not alter or omit any statements or assign ties.

Rank

____ A. I have generally been in excellent health.

____ B. I have had a good marriage (or relationship with another).

____ C. I have made a lot of money.

____ D. I have traveled as much as I wanted.

____ E. I have had a satisfying career in an occupation of my choice.

____ F. I have made a lot of good friends.

____ G. I have had children (a child) who are (is) a great joy to me.

____ H. I have achieved recognition for my talent.

____ I. I have experienced the enrichment of the spiritual nature of life.

____ J. I have generally enjoyed and benefited from my leisure hours.

APPENDIX E

FREQUENCY DISTRIBUTION OF RANKS FOR THE RLLV MEDIANS, MEANS, AND STANDARD DEVIATIONS UNDERGRADUATE PSYCHOLOGY CLASS

Frequency Distribution of Ranks for the RLLV, Medians, Means, and Standard Deviations, Undergraduate Psychology Class (N = 60).

Value Item	Rank[a]										Median	Mean	Standard Deviation
	1	2	3	4	5	6	7	8	9	10			
A = health	18	6	6	13	8	3	1	4	1	0	3.5	3.4	2.3
B = marriage	10	22	10	8	4	4	0	1	1	0	2.4	3.0	1.8
C = money	1	1	2	2	4	4	9	7	9	21	8.5	7.8	2.3
D = travel	0	1	4	5	6	11	16	5	12	0	6.7	6.5	1.9
E = career	9	15	8	7	8	5	3	3	1	1	3.2	3.8	2.3
F = friends	5	5	6	12	14	7	7	3	1	0	4.6	4.6	2.0
G = children	1	5	10	4	4	7	4	9	8	8	6.4	6.2	2.8
H = talent	2	1	8	3	3	6	5	11	13	8	7.7	6.8	2.6
I = spiritual life	12	3	1	2	2	2	6	5	9	18	7.9	6.6	3.5
J = leisure	1	1	5	5	7	10	10	11	6	4	6.6	6.4	2.2

[a] Lower number denotes higher ranking of value.

APPENDIX F

FOLLOW-UP LETTER TO SUBJECTS

Follow-up Letter to Subjects

University of Florida
Gainesville, 32611

Reply To
Reading and Study Skills Center
181 Building E

Dear _____.

Thank you for taking part in my study relating occupational interests and personal values. When I have completely analyzed the data, I will describe the results, the conclusions, and implications in a brief report which will be on file here at the Reading Center and available for any of you to read.

Meantime, I thought you would be interested in your occupational type as determined by your responses to Holland's Vocational Preference Inventory. On the attached description of the six types (or themes), the type you scored highest on is starred in red. You may or may not agree with this description. Most people are, of course, a combination of types.

If you would like to discuss the results further, please make an appointment with me. Mrs. Waterman and Mrs. Goettling have a schedule of my office hours.

Many thanks again,

Margaret Green

APPENDIX G

FREQUENCY DISTRIBUTION OF RANKS FOR THE RLLV, MEDIANS, MEANS, AND STANDARD DEVIATIONS, READING CENTER SAMPLE

Frequency Distribution of Ranks for the RLLV, Medians, Means, and Standard Deviations, Reading Center Sample (N = 60).

RLLV Item	Rank[a]										Median	Mean	Standard Deviation
	1	2	3	4	5	6	7	8	9	10			
A = health	15	13	7	6	8	4	4	0	3	0	2.8	3.4	2.3
B = marriage	14	20	13	7	4	1	0	0	1	0	2.3	2.6	1.5
C = money	2	1	0	3	4	10	8	7	6	19	7.8	7.5	2.4
D = travel	0	2	2	4	5	10	11	14	8	4	7.1	6.9	2.0
E = career	7	4	11	9	5	10	8	5	1	0	4.4	4.6	2.2
F = friends	1	8	6	10	15	6	7	3	3	1	4.8	4.9	2.1
G = children	0	5	16	12	9	1	2	5	3	7	4.2	5.1	2.6
H = talent	1	5	0	2	4	4	6	8	16	14	8.5	7.6	2.5
I = spiritual life	20	1	5	5	1	4	1	6	7	10	4.3	5.1	3.6
J = leisure	0	1	0	2	5	10	13	12	12	5	7.4	7.3	1.7

[a] Lower number denotes higher ranking of value.

APPENDIX H

MEAN AND STANDARD DEVIATIONS OF ALL RLLV ITEMS FOR READING CENTER SAMPLE

Mean and Standard Deviations of All RLLV Items for Reading Center Sample.

RLLV Item	Sex	Mean	s.d.	N
A = health	Women	3.5	2.3	28
	Men	3.3	2.3	32
B = marriage	Women	2.6	1.5	28
	Men	2.6	1.5	32
C = money	Women	8.1	1.9	28
	Men	7.1	2.7	32
D = travel	Women	6.9	1.9	28
	Men	6.9	2.0	32
E = career	Women	4.2	2.0	28
	Men	4.8	2.4	32
F = friends	Women	4.6	2.1	28
	Men	5.3	2.1	32
G = children	Women	5.7	2.8	28
	Men	4.6	2.3	32
H = talent	Women	7.4	2.9	28
	Men	7.7	2.1	32
I = spiritual life	Women	5.1	3.4	28
	Men	5.1	3.9	32
J = leisure	Women	7.0	1.8	28
	Men	7.6	1.6	32

Note. Lower number denotes higher ranking of value.

APPENDIX I

CORRELATIONS OF VPI SCALES WITH THE RLLV, READING CENTER SAMPLE

1. Correlations of VPI Scales with the RLLV, Total Sample, Reading Center (N = 60).

RLLV Item	Real	Inv	Soc	Conv	Ent	Art
A = health	.10	-.22	-.06	.14	.08	-.07
B = marriage	-.18	.05	.14	-.21	-.02	.00
C = money	.12	.35*	.15	-.02	.00	.23
D = travel	.02	-.08	.08	-.09	-.11	-.15
E = career	.01	-.02	.01	.19	.03	-.07
F = friends	.15	-.02	.02	.03	-.04	.10
G = children	-.32*	-.16	.00	-.22	-.18	-.01
H = talent	.17	.13	-.08	.04	.03	.10
I = spiritual life	-.11	-.05	-.14	.07	.13	-.17
J = leisure	.12	-.02	.02	-.02	-.02	.12

Note. On the RLLV, lower numbers denote higher ranking of values. Therefore, correlations are in the opposite direction to those in the table.

* Significant at the .05 level.

2. Correlations of VPI Scales with the RLLV for Men, Reading Center Sample (N = 32).

RLLV Item	Real	Inv	Soc	Conv	Ent	Art
A = health	.34	-.06	-.01	.31	.19	.12
B = marriage	-.33	.02	.19	-.22	.16	.13
C = money	.18	.38*	.26	.05	.09	.33
D = travel	-.01	-.07	-.17	-.19	-.21	-.21
E = career	-.09	-.02	.09	.22	.00	.00
F = friends	-.08	-.29	-.12	-.03	-.13	-.19
G = children	-.36*	-.08	.04	-.40*	-.16	-.07
H = talent	.21	.10	.10	.07	.12	.13
I = spiritual life	-.04	-.03	-.22	.05	-.02	-.19
J = leisure	.10	-.02	-.01	.00	-.01	.06

Note. On the RLLV, lower numbers denote higher ranking of values. Therefore, correlations are in the opposite direction to those in the table.

* Significant at the .05 level.

3. Correlations of VPI Scales with the RLLV for Women, Reading Center Sample (N = 28).

RLLV Item	Real	Inv	Soc	Conv	Ent	Art
A = health	-.33	-.38*	-.12	-.12	-.03	-.31
B = marriage	.05	.09	.08	-.25	-.28	-.16
C = money	.48*	.36	.05	.04	.02	.10
D = travel	.09	-.08	.43*	.09	.04	-.06
E = career	-.01	.07	-.14	.03	-.02	-.19
F = friends	.46*	.26	.15	.00	-.05	.48
G = children	-.14	-.23	.01	.15	-.09	.09
H = talent	.13	.15	-.28	-.02	-.10	.07
I = spiritual life	-.35	-.07	-.10	.11	.42*	-.14
J = leisure	-.07	-.02	.01	-.22	-.18	.16

Note. On the RLLV, lower numbers denote higher ranking of values. Therefore, correlations are in the opposite direction to those in the table.

* Significant at the .05 level.

APPENDIX J

INTERCORRELATIONS AMONG RLLV ITEMS FOR COLLEGE STUDENTS IN AN UNDERGRADUATE PSYCHOLOGY CLASS

Intercorrelations among RLLV Items for College Students in an Undergraduate Psychology Class (N = 60).

	A	B	C	D	E	F	G	H	I
A = health									
B = marriage	-.34*								
C = money	.17	-.07							
D = travel	.07	-.31*	.08						
E = career	-.04	-.24	.21	.29*					
F = friends	-.19	.15	-.26*	-.26*	-.27*				
G = children	-.18	.50*	-.23	-.50*	-.24	.09			
H = talent	-.07	-.28*	.08	.00	-.02	-.26*	-.25		
I = spiritual life	-.32*	-.02	-.57*	-.18	-.38*	.13	-.02	-.15	
J = leisure	.07	-.28*	-.10	.09	-.12	-.06	-.31*	-.16	-.03

* Significant at .05 level.

BIOGRAPHICAL SKETCH

Margaret Jordan Green was born July 9, 1924, in Nanking, China, where her father had been employed by the British American Tobacco Company since 1909. After attending various American and British schools in several cities of North China, she returned to the United States with her parents shortly before the outbreak of World War II to live in Berkeley, California. She graduated from Berkeley High School in 1943. During the war she worked as an engineering aide in Naval research. She attended the University of California from 1945 to 1948.

She married Richard H. Green, a graduate student in English, in 1947, and for the next twenty years lived in the university communities of Princeton, Johns Hopkins, and the University of Illinois while raising her three sons and three daughters. She resumed her higher education at the University of Illinois in 1968 and received the B.A. degree in Art History in 1971.

Her interest in academic and career counseling began when, as a faculty wife and mother of college age children, she had direct and continuing contact with college students during a period of extraordinary changes in higher education. Since returning to college as an undergraduate in 1967, and as a graduate student since 1972, she has experienced at first hand the problems and opportunities of student life.

In 1971 she came to Gainesville with her family and began graduate studies in Counselor Education at the University of Florida. Much of her

practicum and internship work was in the Reading and Study Skills Center. In addition, she taught two courses in the Non-credit Evening Division of the University's Continuing Education Program: one course in career exploration for women, the other in preparation for taking graduate entrance examinations.

She is presently employed in the Learning Lab at Santa Fe Community College and plans to continue her work in investigating the personality problems which impede academic progress and in developing counseling techniques to overcome or alleviate them.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

E.L. Tolbert, Chairman
Associate Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

A. Garr Cranney
Associate Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Franz R. Epting
Associate Professor of Psychology

This dissertation was submitted to the Graduate Faculty of the Department of Counselor Education in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 1977

Dean, Graduate School

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